

REMARKS

In view of the foregoing amendments and the following representations, reconsideration and allowance of the above-identified application is respectfully requested.

Page 6 of the specification has been amended to include the term "hydrogel forming polymer" and to delete the term "a" to for grammatical reasons. The term "hydrogel forming polymer" appeared in claim 5 as originally filed and is understood in the art to mean a polymer that gels or swells in the presence of water as recited on page 6, lines 31-32 of the specification. No new matter is added by this amendment.

Claims 1, 3, 4, 6-13, 16-22, 24-26, 28 and 29 are in the present application. Independent claims 1, 19 and 21 have been amended to specifically indicate that claimed dosage form is a tablet that comprises a core, an enteric coating and immediate release layer. The core comprises a mixture of methylpheindiate and a hydrogel polymer. The enteric coating comprises an enteric polymer and at least one processing aid and the immediate release layer comprises methylphenidate and a binder. The claims have also been amended to indicate that the dosage form, when tested in a USP type 2 apparatus at 50 rpm, 37°C and 900 ml of a pH 7.5 phosphate buffer exhibits the following release profile: 1-35% after 1 hour; 5-40% after 2 hours and not less than 70% after 10 hours. No new matter is added by these amendments. Support can be found on page 4, lines 10-20, page 6, lines 28-32, page 8, lines 1-4, page 9, lines 21-30, Examples 1-4 on pages 10-18 of the specification and claim 5 as originally filed.

On page 3 of the Office Action, the Examiner rejected claims 1, 3-22, 24-26 and 28-

29¹ under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Mehta et al. United States Patent No. 5,837,284 ("Mehta et al.") in view of Mulye, United States Patent No. 6,475,493 ("Mulye") and Beiman et al.. United States Patent No. 6,312,728 ("Beiman").

In response to this rejection, Applicants have amended the pending claims to recite that the dosage form is a tablet comprising a tablet core and enteric coating around the tablet core and an immediate release coating. The amended claims also require the core to comprise a mixture of methylphenidate or a pharmaceutically acceptable salt and a hydrogel polymer. The enteric coating comprises an enteric polymer and a conventional processing aid. Finally the entire tablet dosage form should release 1-35% of the methylphenidate after 1 hour, 5-40 % of the methylphenidate after 2 hours and not less than 70% of the methylphenidate after 10 hours when tested according to the USP procedures in a pH 7.5 phosphate buffer.

It is respectfully submitted that the amended claim are patentable over the cited references either alone or combined because the cited references all disclose preparations that use water-insoluble polymer coatings or modified enteric coatings to control the release of the drug and not a hydrogel core and enteric coating as recited in the pending claims. An individual of ordinary skill in the art would understand that the hydrogel polymer in the core of the pending claims, allows the methylphenidate in the core to be released in a controlled or sustained manner after the enteric coating has dissolved. This controlled or sustained release property is confirmed by the recited dissolution profile in a pH 7.5 medium. Specifically, after taking into account the immediate release

¹ The Office Action does not specifically reject claim 29. Because claim 29 is pending and the Examiner indicated that no claim was allowed it is assumed that the failure to list claim 29

methylphenidate layer and the fact that enteric polymers dissolve in pH 7.5 media, the more than 2 hour delayed release of methylphenidate from the dosage form in such a high pH medium must be due in part to the hydrogel polymer in the core.

Applicants gratefully acknowledge the Examiner's comments that the Mehta fails to disclose the use of an enteric polymer. As discussed in the prior submissions, the Mehta reference discloses oral methylphenidate dosage forms that employ at least two different types of pellets: an immediate release pellet and a coated delay release pellet. Col. 3, lines 3-19. The Mehta reference fails to disclose enteric coated tablets.

The release of the drug from the coated pellet taught in the Mehta reference is controlled by the amount of ammonio methacrylate copolymer applied to the drug pellet. Col. 10, lines 16-37. There is no hint or suggestion in the Metha reference to prepare a methylphenidate tablet that employs a hydrogel polymer in a core tablet to control the release of methylphenidate. There also is no hint or suggestion in the Mehta reference to coat a tablet hydrogel tablet core with an enteric polymer coating to further delay the release of the drug from the tablet core.

The Mulye reference also teaches dosage forms wherein the release of the drug is controlled by the coating not the core as required by the pending claim. For example, Col. 7, lines 8-11 of the Mulye reference states 'the water insoluble polymer and the enteric polymer interact to form a barrier over the core element containing the active ingredient to control the rate of release'. *See also*: Col. 8, lines 55-62 ("The coating composition of the present invention is present in an amount effective to retard the release of the active ingredient"). The Mulye coating comprises at least 75% of a water insoluble polymer and

among the rejected claims was an inadvertent typographical error.

1-25% of an enteric polymer. Mulye, Col. 4, lines 30-49. The Mulye reference specifically teaches that the amount of enteric polymer should not exceed 25% of the coating. Mulye, Col. 6, lines 64-65 ("The enteric polymer, however, is preferably not present in amounts greater than 25% by weight of the coat." (emphasis added)).

The Muyle reference fails to disclose or even suggest mixing a hydrogel polymer with methylphenidate to prepare a controlled release tablet core that is subsequently coated with an enteric coating containing 45% or more enteric material and conventional processing aids as recited in the pending claims.

Like the Metha reference, the newly cited Beiman reference also teaches a coated pellet dosage form and not a tablet formulation. The Beiman reference fails to mention or suggest that methylphenidate can be used as a possible drug in the coated pellet cores. The Beiman pellets employ a drug core, coated with an enteric polymer coating followed by an immediate release drug layer applied to the enteric coating. A third enteric coating layer may also be employed on the Beiman pellets. Col. 6, lines 40-66. The drug core for the Beiman pellets is prepared by coating a drug suspension onto a biologically inert substrate such as a non-pareil sphere. Col. 7, line 66 to Col.8, line 5. See also Col. 8, line 58-61.

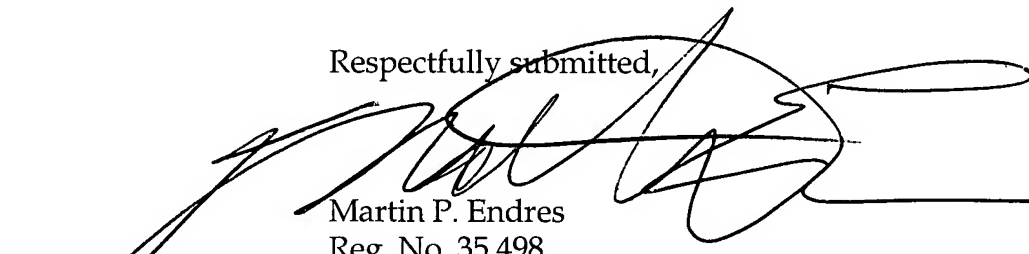
There is no hint or suggestion in the Beiman reference to prepare a methylphenidate tablet that employs a hydrogel polymer in a core to control the release of methylphenidate. There also is no hint or suggestion in the Beiman reference to coat a hydrogel tablet core with an enteric coating to further delay the release of the methylphenidate from the tablet core. Further, the Beiman pellets could not exhibit the

slow dissolution profile recited in the pending claims because the enteric coatings would rapidly disintegrate and release the drug in a pH of 7.5.

It is respectfully submitted that the pending claims are patentable over the cited references either alone or combined because none of the cited references even remotely suggest preparing a controlled release methylphenidate tablet dosage form comprising: (1) a tablet core that is a mixture of methylphenidate and a hydrogel polymer; (2) an enteric coating that is a mixture of 45 % or more enteric polymer and at least one conventional processing aid; and (3) an immediate release layer of methylphenidate. Further, none of the cited references suggest using a combination of an enteric polymer coating and a hydrogel polymer core to control the release of methylphenidate in a pH 7.5 phosphate medium as recited in the pending claims

Based upon the foregoing amendments and representations, Applicants respectfully submit that the rejection of the claims in the above-identified application have been overcome and should be withdrawn. Early and favorable action is earnestly solicited.

Respectfully submitted,


Martin P. Endres
Reg. No. 35,498

MAILING ADDRESS:
HEDMAN & COSTIGAN, P.C.
1185 Avenue of the Americas
New York, NY 10036-2601
(212) 302-8989